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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,619	01/10/2005	Katsuya Nagayama	50212-632	2568

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EXAMINER	
HOFFMANN, JOHN M	
ART UNIT	PAPER NUMBER
1791	
MAIL DATE	DELIVERY MODE
06/02/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/520,619	NAGAYAMA ET AL.	
	Examiner	Art Unit	
	John Hoffmann	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) *9 and 10* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/5/2006; 1/10/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election of Group 1 (claims 1-8) in the reply filed on 4/8/08 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 9-10 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4/8/2008.

Claim interpretation.

Claim 1 refers to a "cooling means". It is noted that the claims do not use the words "means for"; thus, the claims do not meet the first prong of the three prong test for 35 USC 112 6th paragraph.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1: There is no antecedent basis for: "the course" of line 17. It is unclear if the "is annealed" of line 18 is a further annealing step, or if it further limits the annealing of line 13; suggestion - that the claim refer to "further annealed" or "said annealing". There is no antecedent basis for "the length"; it is noted that a furnace can have two lengths - the physical length (which includes ancillary furnace structure), and the effective length; It is suggested that the claim use "a length" rather than "the length". Line 25: there is no antecedent basis for "the viscosity": since the fiber has core and clad regions, there are two glasses. And the two glasses may have different viscosities. Thus "a viscosity" is suggested rather than "the viscosity".

There is no antecedent basis for "the cooling speed" lines 19-20: it is noted that most fiber cooling steps are not linear - the cooling speed varies rapidly. It is unclear whether the claim requires a constant speed, or that the rate can never be over 2000 C/sec, or that it can be over 2000 C/sec for a portion of the cooling, as long as at some time it is less than 2000 C/sec.

Is unclear what is meant by the "to be" language of line 20. It is unclear whether such is actually required, or merely that one has the intention - irrespective of the actual cooling speed.

Claim 2: it is unclear if the annealing is in addition to the two anneals of claim 1, or if there is just one anneal in the entire process. The "at a temperature of 800-1600 C" is vague as to whether the fiber or the furnace has the temperature. It is also noted that 800-1600 is not "a temperature", it is a range of many temperatures. It is unclear if it means that the furnace/fiber has all the temperatures within the range, or if it has

exactly one temperature within the range, or that that the furnace/fibers never exceeds 1600 and never falls below 800 , or something else.

From MPEP 2111.01:

THE WORDS OF A CLAIM MUST BE GIVEN THEIR "PLAIN MEANING" UNLESS **>SUCH MEANING IS INCONSISTENT WITH< THE SPECIFICATION

**> Although< claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allow. In re American Academy of Science Tech Center, 367 F.3d 1359, 1369, 70 USPQ2d 1827, 1834 (Fed. Cir. 2004) (The USPTO uses a different standard for construing claims than that used by district courts; during examination the USPTO must give claims their broadest reasonable interpretation >in light of the specification<.). This means that the words of the claim must be given their plain meaning unless **>the plain meaning is inconsistent with< the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) (discussed below); Chef America, Inc. v. Lamb-Weston, Inc., 358 F.3d 1371, 1372, 69 USPQ2d 1857 (Fed. Cir. 2004) (Ordinary, simple English words whose meaning is clear and unquestionable, absent any indication that their use in a particular context changes their meaning, are construed to mean exactly what they say. Thus, "heating the resulting batter-coated dough to a temperature in the range of about 400oF to 850oF" required heating the dough, rather than the air inside an oven, to the specified

Claim 3 is indefinite for the same reasons.

Claim 4 is temperature limitation is indefinite for the same reasons. It is unclear whether the "is introduced" is limited to the introduction of claim 1, or if it could be a second introduction. It is noted that the plain reading of claim 4 requires that the cooling means has the 700-1300 C temperature, but it appears that applicant really intended that the fiber have the temperature. Thus it is likely to cause some confusion as to whether the plain meaning or the appearance controls the proper interpretation.

Claim 6: it is unclear whether the annealing is the same annealing as required by claim 1. Moreover, although it would appear that they are the same annealing, claim 1 refers to "annealing time" which would seem to be what claim 6 is directed to. But since claim 6 uses different language, such suggest different things. *Karlin Tech. Inc. v. Surgical Dynamics, Inc.*, 177 F.3d 968, 971-72, 50 USPQ2d 1465 (Fed. Cir. 1999) (recognizing "the common sense notion that different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope.").

Claim 7 is indefinite because it uses brackets which denote deletion in amendments. The claim recites "is doped" (which parallels) the "is annealed", "is introduced" etc. of the other claims. It is unclear if the interpretation should apply. To examiner the clearest language would be recite the step using "-ing": Heating, annealing, drawing, etc. And that claim 7 recite that "the core region comprises Ge." (or "Ge dopant". Claim 7: there is no antecedent basis for "the relative refractive –index difference" .

Claim 8: the use of "respectively" makes the claim indefinite as to what the three compositions are in respect to. The use of "comprised" and "pure" is confusing because "comprised" indicates it is open to other elements, but "pure " indicates that it is closed to other elements.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohga 5320658 in view of Amos 5366537 and optionally in view of Yoshimura 5073179.

Ohga discloses the drawing and heat treatment step: 105 is the drawing furnace and 1 is the heating furnace. See figure 2 as well as col. 4, line 22. Ohga does not disclose the cooling step/means, however the fiber is coated by 111 after it is annealed.

Amos teaches to use a cooling means/step so as to get the fiber to its optimal coating temperature; col. 1, line 39 to col. 2, line 18. It would have been obvious to provide a cooler beneath the Ohga heater, so as to cool it to the proper coating temperature.

Yoshimura teaches to use a cooling device to get the measuring device as close as possible to the furnace to increase control gain (col. 1, lines 39-51 and col. 6, lines 3-9) as well as to better coat the fiber. It would also have been obvious to add a cooling device to the Ohga apparatus and to cool the fiber for the further advantage of better control of the draw process.

As to the cooling speed "is to be 2000 C/second or less. It would have been obvious that the cooling speed would be much less than that, especially when the fiber gets close to room temperature. Eventually it would be 0 C/sec. It is noted that Examiner is not making a finding that the cooling speed is never greater than 2000 C/sec, or that such would have been obvious. Rather Examiner is only making the finding that the claim is rather broad scope and merely requires that during some portion the cooling is less than the limit. Moreover, the "is to be" is merely an intention. Since having the intention is a mental step that cannot be determined without a mind-reading machine, it does not define over the prior art. Applicant is encouraged to specify any actual temperature cooling rates as one of the process limitations.

As to the relaxation time: See col. 4, lines 9-15 of Ohga. It is clear that the duration is a result effective variable. It would have been obvious to perform routine experimentation to determine the optimal length of time for annealing.

Claims 2-3: see Example 1 of Ohga.

Claim 4: based on Examples 1 and 4 of Ohga, one would expect that the fiber would be at the claimed temperature as it leaves the heating furnace. Thus, assuming there is no distance between the cooler and the furnace, the fiber would have the correct temperature. It would have been obvious to have the cooler as close as possible to the furnace or to even have them connected, so as to make the apparatus as compact as possible.

From MPEP 2144.04

B. Making Integral
In re Larson, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965) (A claim to a fluid transporting vehicle was rejected as obvious over a prior art reference which differed from the prior art in claiming a brake drum integral with a clamping means, whereas the brake disc and clamp of the prior art comprise several parts rigidly secured together as a single unit. The court affirmed the rejection holding, among other reasons, "that the use of a one piece construction instead of the structure disclosed in [the prior art] would be merely a matter of obvious engineering choice."); but see Schenck v. Nortron Corp., 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983) (Claims were directed to a vibratory testing machine (a hard-bearing wheel balancer) comprising a holding structure, a base structure, and a supporting means which form "a single integral and gaplessly continuous piece." Nortron argued that the invention is just making integral what had been made in four bolted pieces. The court found this argument unpersuasive and held that the claims were patentable because the prior art perceived a need for mechanisms to dampen resonance, whereas the inventor eliminated the need for dampening via the one-piece gapless support structure, showing insight that was contrary to the understandings and expectations of the art.).

Claim 5: Ohga does not teach the claimed line speed. Yoshimura discloses rates of 1000 m/min (col. 1, line 56). It would have been obvious to arrange the Ohga process to be as fast as desired - depending upon the amount of fiber one needs to create.

Claim 6: as indicated above, it would have been obvious to perform routine experimentation to determine the optimal time.

Claims 7-8: Examiner takes Official Notice that the use of Ge as dopant in cores And claddings of pure silica, or silica doped with F are notorious well known. In fact, the USPTO classification has optical fiber process subclasses directed to such: 65/397 and 65/398. The properties and advantages of such dopants are well known. It would have been obvious to use either or both of dopants in the manner claimed, for any of their well known advantages. And the amounts would have been obvious depending upon the desired optical properties of the final fiber.

Information Disclosure Statement

The information disclosure statement filed 1/10/2005 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the

examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement.

The item that is lined through does not contain the date of the reference - thus it was lined through.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Petisce is cited as being cumulative to Ohga. Although the art applied in the International report is not presently applied, it appears that such could have been. The presently applied art was deemed to better teach the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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